



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,631	07/03/2003	Kuansan Wang	M61.12-0521	4356

27366 7590 10/02/2008
WESTMAN CHAMPLIN (MICROSOFT CORPORATION)
SUITE 1400
900 SECOND AVENUE SOUTH
MINNEAPOLIS, MN 55402-3244

EXAMINER

YEN, ERIC L

ART UNIT	PAPER NUMBER
----------	--------------

2626

MAIL DATE	DELIVERY MODE
-----------	---------------

10/02/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/613,631	Applicant(s) WANG, KUANSAN	
	Examiner ERIC YEN	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-29 and 32-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 5-29, 32-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. In response to the Final Office Action mailed 4/9/08, applicant has submitted an amendment and Request for Continued Examination filed 6/17/08.

Claims 1, 5-6, 8, 10-14, 19-20, 23, 24, and 27, have been amended. Claims 2-4 and 30-31 have been cancelled.

Response to Arguments

2. Applicant's arguments with respect to claims 1-38 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 5-7, 13-18, 25-29, 37-38, are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams et al. (US 2003/0212561), hereafter Williams.

As per Claim 1, Williams teaches a computer readable storage medium having instructions that, when implemented on a computer cause the computer to process information ("computer software instructions", paragraph 61)

comprising:

a VoiceXML module executing a form interpretation algorithm (“IVR VXML applications”... paragraph 61; “IVR systems can be programmed... VXML... SALT”, paragraph 15; Figure 5; VXML application files... audio prompt”, paragraph 63) including instructions executed by the computer in a defined order based on an execution algorithm to cause the computer to establish an interactive dialog with a user (“IVR VXML applications”... paragraph 61; “IVR systems can be programmed... VXML... SALT”, paragraph 15; Figure 5; “VXML application files... audio prompt”, paragraph 63; “dialogs”, paragraph 15) wherein the instructions process dialog events associated with at least one of recognition, prompting, and messaging events (“IVR”, paragraph 3; “branching voice queries... caller responds with button pushes... or voice responses”, paragraph 5; “call flow”, paragraphs 10-11; “call flow”, paragraphs 73-76; Figure 5; where an audible response from the user is processed by speech recognition of some form, prompting is generally performed in a call flow, call flow is generally the sequence of prompts used to conduct a dialog, and the “Welcome” prompt shown in Figure 5 is a “messaging event”)

a SALT module having speech application language tags embedded within the VoiceXML module, the SALT module including at least one object having a temporal trigger for initializing an operation associated with the instructions of the VoiceXML module during the interaction, wherein the operation initialized by the SALT module comprises at least one, but not all, of recognition, prompting, and messaging events, (“branching voice queries... caller responds with button pushes... or voice responses”,

Art Unit: 2626

paragraph 5; where the output of a prompt is a prompting event, and only a prompting event, the "caller response" is a recognition event [i.e., typically IVR systems provide a window for the user to answer]) and wherein the execution algorithm automatically invokes the temporal trigger for initializing the operation when the at least one object is encountered ("IVR VXML applications"... paragraph 61; "IVR systems can be programmed... VXML... SALT", paragraph 15; Figure 5; "VXML application files... audio prompt", paragraph 63; "dialogs", paragraph 15) wherein the instructions process dialog events associated with at least one of recognition, prompting, and messaging events ("IVR", paragraph 3; "branching voice queries... caller responds with button pushes... or voice responses", paragraph 5; "call flow", paragraphs 10-11; "call flow", paragraphs 73-76; Figure 5; where, in a call flow [i.e., the sequence of prompts], the output of a particular prompt before another prompt makes a temporal relation between any two prompts, and so the interpretation of the VXML document to decide that one prompt is to be output first/second/etc. after the dialog facilitated by the call flow is initiated [e.g., the system decides to output "welcome" in Figure 5 some amount of time after initiating a dialog corresponding to Figure 5's VXML form).

It would have been obvious to one of ordinary skill in the art at the time of invention to use tested call flow in actual IVR system implementation or otherwise the tested system serves no practical purpose, so while Williams is specifically directed to the operation of a test system being tested with a virtual user, one of ordinary skill in the art would recognize that the results of the test and the tested system would eventually be used with an actual user to facilitate call flow using the VXML and SALT tags since

Art Unit: 2626

the IVR system gains its practical use from interacting with actual people, and not just other machines.

As per Claim 5, Williams teaches wherein the temporal trigger initializes a speech recognition event ("branching voice queries... caller responds with button pushes... or voice responses", paragraph 5; "call flow", paragraphs 10-11; "call flow", paragraphs 73-76; where dialog systems usually involve a window for listening to the user's response after a particular prompt is played to the user)

As per Claim 6, Williams teaches wherein the temporal trigger initializes a dual-tone multi-frequency (DTMF) recognition event ("branching voice queries... caller responds with button pushes... or voice responses", paragraph 5; "call flow", paragraphs 10-11; "call flow", paragraphs 73-76).

As per Claim 7, Williams teaches wherein the temporal trigger initializes a messaging event (Figure 5; "VXML application files... audio prompt", paragraph 63; "dialogs", paragraph 15; where the Welcome prompt is a general message to the user).

As per Claim 13, Williams teaches wherein the SALT module executes a messaging event to connect to a remote application (Figure 3).

As per Claim 14, Williams teaches wherein the SALT module receives the result based on the messaging event and renders the result to a user ("display", paragraph 39)

As per Claim 15, Williams teaches wherein the execution algorithm automatically advances to a subsequent instruction after completion of the operation ("dialogs", paragraph 15).

As per Claim 16, Williams teaches wherein the trigger is one of an indication of error, exception, recognition, and no recognition ("dialogs", paragraph 15; "incorrect or unintelligible", paragraph 54)

As per Claim 17, Williams teaches wherein the trigger is completion of a playback instruction ("dialogs", paragraph 15; Figure 5; where stopping after a welcome message doesn't make sense in an IVR system so a prompt for information following completion of the welcome is obvious).

As per Claim 18, Williams teaches wherein the trigger is receipt of a message ("branching voice queries... caller responds with button pushes... or voice responses", paragraph 5; "call flow", paragraphs 10-11).

As per Claims 25-26 and 37-38, their limitations are similar to those in Claims 13-14, and so are rejected under similar rationale.

As per Claim 27-29, their limitations are similar to those in Claim 1, and 5-7, and so are rejected under similar rationale.

5. Claims 8-10, 12, 19, 21-22, 24, 32-34, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams, as applied to Claim 1, above, and further in view of Nakagawa et al. (US 7,424,429), hereafter Nakagawa.

As per Claim 8, Williams fails to teach wherein the VoiceXML module declares a first field and a second field and wherein the SALT module initializes a recognition event to obtain speech input from a user and fills the first field with a first portion of the speech input and fills the second field with a second portion of the speech input.

Nakagawa teaches wherein the VoiceXML module declares a first field and a second field and wherein the SALT module initializes a recognition event to obtain speech input from a user and fills the first field with a first portion of the speech input and fills the second field with a second portion of the speech input ("from Tokyo to Osaka", col. 5, lines 35-56; "grammars", col. 6, lines 51-63; Figures 9A-9B; Figure 5).

Therefore, it would have been obvious to one of ordinary skill in the art to modify Williams to include the teaching of Nakagawa of wherein the VoiceXML module declares a first field and a second field and wherein the SALT module initializes a

Art Unit: 2626

recognition event to obtain speech input from a user and fills the first field with a first portion of the speech input and fills the second field with a second portion of the speech input, in order to improve the system's interface with the user, as described by Nakagawa (col. 1, lines 39-55).

As per Claim 9, Williams fails to teach wherein a first grammar is associated with the first field and a second grammar is associated with the second field.

Nakagawa teaches wherein a first grammar is associated with the first field and a second grammar is associated with the second field ("from Tokyo to Osaka", col. 5, lines 35-56; "grammars", col. 6, lines 51-63; Figures 9A-9B; Figure 5).

Therefore, it would have been obvious to one of ordinary skill in the art to modify Williams to include the teaching of Nakagawa of wherein a first grammar is associated with the first field and a second grammar is associated with the second field, in order to improve the system's interface with the user, as described by Nakagawa (col. 1, lines 39-55).

As per Claim 10, Williams fails to teach wherein the SALT module initializes a recognition event having a plurality of grammars to obtain a recognition result and associates the recognition result with at least one of the plurality of grammars.

Nakagawa teaches wherein the SALT module initializes a recognition event having a plurality of grammars to obtain a recognition result and associates the

Art Unit: 2626

recognition result with at least one of the plurality of grammars ("from Tokyo to Osaka", col. 5, lines 35-56; "grammars", col. 6, lines 51-63; Figures 9A-9B; Figure 5).

Therefore, it would have been obvious to one of ordinary skill in the art to modify Williams to include the teaching of Nakagawa of wherein the SALT module initializes a recognition event having a plurality of grammars to obtain a recognition result and associates the recognition result with at least one of the plurality of grammars, in order to improve the system's interface with the user, as described by Nakagawa (col. 1, lines 39-55).

As per Claim 12, Williams fails to teach wherein the VoiceXML module declares a field and wherein the SALT module initializes a recognition event to obtain a recognition result from the user to fill the field and executes a prompt to render the field to the user.

Nakagawa teaches wherein the VoiceXML module declares a field and wherein the SALT module initializes a recognition event to obtain a recognition result from the user to fill the field and executes a prompt to render the field to the user ("from Tokyo to Osaka", col. 5, lines 35-56; "grammars", col. 6, lines 51-63; Figures 9A-9B; Figure 5).

Therefore, it would have been obvious to one of ordinary skill in the art to modify Williams to include the teaching of Nakagawa of wherein the VoiceXML module declares a field and wherein the SALT module initializes a recognition event to obtain a recognition result from the user to fill the field and executes a prompt to render the field

Art Unit: 2626

to the user, in order to improve the system's interface with the user, as described by Nakagawa (col. 1, lines 39-55).

As per Claim 19, its limitations are similar to those in Claims 1 and 8, and so is rejected under similar rationale.

As per Claims 21-22, 24, 32-34, and 36, their limitations are similar to those in Claims 8-10, and 12, and so are rejected under similar rationale.

6. Claims 11, 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams, as applied to Claim 1, and further in view of Nakagawa and Gorin et al. (US 7,003,459), hereafter Gorin.

As per Claim 11, Williams fails to teach wherein the VoiceXML module declares a first field and a second field and wherein the Salt module initializes a recognition event to obtain an input from a user and associates one portion of the input with the first field and another portion of the input with the second field.

Nakagawa teaches wherein the VoiceXML module declares a first field and a second field and wherein the Salt module initializes a recognition event to obtain an input from a user and associates one portion of the input with the first field and another portion of the input with the second field ("from Tokyo to Osaka", col. 5, lines 35-56; "grammars", col. 6, lines 51-63; Figures 9A-9B; Figure 5).

Art Unit: 2626

Therefore, it would have been obvious to one of ordinary skill in the art to modify Williams to include the teaching of Nakagawa of wherein the VoiceXML module declares a first field and a second field and wherein the Salt module initializes a recognition event to obtain an input from a user and associates one portion of the input with the first field and another portion of the input with the second field, in order to improve the system's interface with the user, as described by Nakagawa (col. 1, lines 39-55).

Williams, in view of Nakagawa, fail to teach where the first portion is a speech input and the second portion is a DTMF input.

Gorin teaches where the first portion is a speech input and the second portion is a DTMF input ("DTMF... in combination with the user's communication", col. 6, lines 15-26).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Williams, in view of Nakagawa, to include the teaching of Gorin of where the first portion is a speech input and the second portion is a DTMF input, in order to increase flexibility of input, as described by Gorin (col. 6, lines 15-26).

As per Claim 23 and 35, their limitations are similar to those in Claim 11, and so are rejected under similar rationale.

Art Unit: 2626

7. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Williams, in view of Nakagawa, as applied to Claim 19, and further in view of Aust et al. (US 5,860,059), hereafter Aust.

As per Claim 20, Williams, in view of Nakagawa fail to teach wherein the form interpretation algorithm continuously loops through the voiceXML executable instructions until the first and second VoiceXML fields have been filled.

Aust teaches wherein the form interpretation algorithm continuously loops through the voiceXML executable instructions until the first and second VoiceXML fields have been filled ("from where", col. 3, line 26 - col. 4, line 31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Williams, in view of Nakagawa, to include the teaching of Aust of wherein the form interpretation algorithm continuously loops through the voiceXML executable instructions until the first and second VoiceXML fields have been filled, in order to ensure that all necessary information is obtained, as described by Aust (col. 3, line 26 - col. 4, line 31).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIC YEN whose telephone number is (571)272-4249. The examiner can normally be reached on M-F 7:30-4:00.

Art Unit: 2626

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EY 9/13/08

/Patrick N. Edouard/
Supervisory Patent Examiner, Art Unit 2626